

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) A communications method comprising:

2 ~~using an amplifier, performing amplification of a small number of transmit~~
3 ~~tones, the amplification producing obtaining~~ unwanted intermodulation distortion
4 ~~products from an amplifier;~~

5 measuring the intermodulation distortion products to obtain an
6 intermodulation distortion product measurements; and

7 determining whether amplifier linearity is within an acceptable range based
8 on the intermodulation distortion product measurement and a desired data rate;
9 and

10 controlling the amplifier to reduce output signal distortion for data rates
11 higher than the desired data rate but not for data rates below the desired data rate.

1. 2. (Currently Amended) The method of claim 1, further comprising:

2 adjusting amplifier linearity to fall within said acceptable range.

1 3. (Currently Amended) The method of claim 2,
2 wherein adjusting amplifier linearity further comprises:
3 determining an acceptable error vector magnitude for the desired data
4 rate;
5 determining a corresponding desired third-order output intercept point
6 value; and
7 adjusting at least one amplifier control signal in response to the
8 desired third-order output intercept point value.

1 4. (Currently Amended) The method of claim 1, further comprising:
2 receiving the intermodulation distortion products through a leakage path.

1 5. (Currently Amended) The method of claim 4,
2 wherein measuring the intermodulation distortion products further
3 comprises:
4 transforming a received signal from the time domain to the frequency
5 domain.

1 6. (Currently Amended) The method of claim 1, further comprising:

2 | ~~producing the small number of transmit tones using an IFFT operation to~~
3 | obtain the unwanted intermodulation distortion products.

1 | 7. (Currently Amended) A communications apparatus comprising:

2 | ~~an amplifier (121) for performing amplification of a small number of transmit~~
3 | ~~tones, the amplification producing that produces unwanted intermodulation~~
4 | distortion products;

5 | means for measuring the intermodulation distortion products to obtain an
6 | intermodulation distortion product measurement; and

7 | means for determining whether amplifier linearity is within an acceptable
8 | range based on the intermodulation distortion product measurement and a desired
9 | data rate; and

10 | means for controlling the amplifier to reduce output signal distortion for data
11 | rates higher than the desired data rate but not for data rates below the desired data
12 | rate.

1 | 8. (Currently Amended) The apparatus of claim 7, further comprising:

2 | means for adjusting amplifier linearity to fall within said acceptable range.

1 | 9. (Currently Amended) The apparatus of claim 8,

2 wherein said means for adjusting amplifier linearity further comprises:
3 means for determining an acceptable error vector magnitude for the
4 desired data rate;
5 means for determining a corresponding desired third-order output
6 intercept point value; and
7 means for adjusting at least one amplifier control signal in response to
8 the desired third-order output intercept point value.

1 10. (Currently Amended) The apparatus of claim 7, further comprising:
2 a leakage path through which the intermodulation distortion products are
3 received.

1 11. (Currently Amended) The apparatus of claim 10,
2 wherein said means for measuring the intermodulation distortion products
3 further comprises an FFT block.

1 12. (Currently Amended) The apparatus of claim 7, further comprising:
2 and an IFFT block that obtains the unwanted intermodulation distortion
3 products for producing the small number of transmit tones.